

**Franklin County Specific  
PEDIATRIC PROTOCOL: P-23  
Nausea and Vomiting**

<b>I</b>	<b>PM</b>	
S	S	Perform initial assessment, treat priority conditions. Initiate O2 therapy per protocol.
S	S	Establish <b>IV/IO NS</b> , as appropriate per certification and training.
<b>O</b>	S	If patient has <b>prolonged vomiting, active vomiting after EMS arrival or nausea causing significant discomfort</b> administer <b>Ondansetron 0.1mg/kg IV or IO UP TO 40KG OR 4mg MAXIMUM DOSE.</b>
S	S	If the patient presents with evidence of symptomatic dehydration/hypotension administer <b>20ml/kg IV/IO bolus NSS</b> and reassess.
S	S	<b>Transport and notify hospital ASAP</b> with goal to limit on-scene time to <b>10 min. or less.</b>

## I. General Drug Class: **Antiemetics**

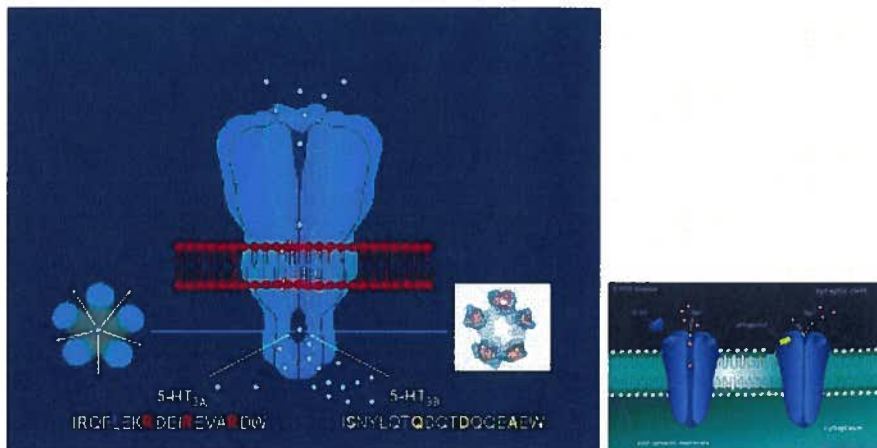
## II. Pharmacologic Drug Class:

### **5-Hydroxytryptamine<sub>3</sub> (5-HT<sub>3</sub>) Receptor Antagonists**

## III. Pharmacology

The 5-HT<sub>3</sub> receptor antagonists are selective serotonin inhibitors and competitively inhibit the binding of serotonin to 5-HT<sub>3</sub> receptors. Their antiemetic effects are postulated to stem from blockade of 5-HT<sub>3</sub> receptors located on the nerve terminals of the vagus nerve in the periphery, enteric neurons in the GI tract and centrally in the chemoreceptor trigger zone of the area postrema.

These drugs have little or no affinity for other serotonin receptors; for alpha or beta-adrenergic; for dopaminergic; or for histamine receptors.



## IV. Indications

### **A. EMS**

**Prolonged vomiting, active vomiting after EMS arrival or nausea causing significant discomfort**

### **B. FDA Approvals**

#### **1. All Labeled Uses:**

- A) Prevention of Cancer Chemotherapy-Induced Nausea and Vomiting
- B) Prevention of Post-Operative Nausea and vomiting
- C) Prevention of Radiation-Induced Nausea and Vomiting.

#### **2. Unlabeled Uses:**

- A) Excessive Vomiting in Pregnancy
- B) Nausea and Vomiting\*\*
- C) Addiction

## V. Adverse Reactions

### A. Most Frequent:

>Chills, Constipation, Diarrhea, Fever, Headache

### B. Less Frequent:

>Abdominal Pain with Cramps, Dizziness, Fatigue, General Weakness

### C. Rare:

>Abnormal Hepatic Function Tests, Acute Hepatic Failure, Anaphylaxis, Angioedema, Anxiety, Blurred Vision, Bradycardia, Bronchospasm

### D. Hypersensitivity (allergy) to other selective 5-HT<sub>3</sub> receptor antagonists.

1. alosetron (Lotronex)
2. dolasetron (Anzemet)
3. granisetron (Kytril),
4. palonosetron (Aloxi)

### E. QT Prolongation

>Rarely and predominantly with intravenous Ondansetron, transient ECG changes including QT interval prolongation have been reported.

### F. Blindness

>Cases of transient blindness, predominantly during intravenous administration, have been reported. These cases of transient blindness were reported to resolve with a few minutes up to 48 hours.

## VI. Precautions

A. Occasionally, Ondansetron precipitates at the stopper/vial interface in vials stored upright. Potency and safety are not affected. If a precipitate is observed, resolubilize by shaking the vial vigorously.

## VII. Pregnancy/Lactation

A. Pregnancy: Teratogenic Effects: **Pregnancy Category B.**

	<b>Pregnancy Category</b>	<b>Explanation</b>
All Trimesters	B	Animal studies have revealed no evidence of harm to the fetus, however, there are no adequate studies in pregnant women OR animal studies have shown an adverse effect, but adequate studies in pregnant women have failed to demonstrate a risk to the fetus.

B. Lactation:Nursing Mothers: Ondansetron is excreted in the breast milk of rats. It is not known whether Ondansetron is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Ondansetron is administered to a nursing woman.

#### VIII. Administration

##### A. Adult

- **4 mg IV/IM/IO.**
- Give IV/IO slowly, a minimum of over 30 sec.

##### B. Pediatric

- **0.1 mg/kg IV/IO**
- Up to 40 kg (4 mg) maximum.
- Give IV/IO slowly, a minimum of over 30 sec.

#### IX. How Supplied: **ONDANSETRON INJECTION, USP**

- A. 2 mg/mL, is supplied as follows: 2-mL single-dose vial.  
> 4mg dose per vial (2mg/ml X 2 ml)

#### X. Storage

- A. Store between 20° and 25°C (68° and 77°F). Protect from light.